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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/394,096	09/13/1999	PAUL JOSEPH DAVIS	DAVIS6-9-5	3701
7590 07/01/2004			EXAMINER	
WILLIAM H BOLLMAN MANELLI DENISON & SELTER PLLC 2000 M STREET NW SUITE 700 WASHINGTON, DC 20036-3307			SING, SIMON P	
			ART UNIT	PAPER NUMBER
			2645	18

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/394,096

Applicant(s)

DAVIS ET AL.

Examiner

Simon Sing

Art Unit

2645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 7, 9-11, 14-17, 19, 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chamberlin et al. US 4,817,127 in view of Sacca US 5,692,042.

1.1 Regarding claims 1 and 22, Chamberlin discloses a modular telephone system in figures 4 and 6. Chamberlin teaches combining a speakerphone 18 (column 13, lines 29-31) with two recording/playback modules 12 and 14, one for recording a telephone conversation and one for playing an outgoing announcement (column 22, lines 38-43). Chamberlin also teaches independent operation of the speakerphone 18 and each recording/playback module (column 16, lines 19-43). Chamberlin's telephone system comprising:

a receive signal from a telephone line (telephone conversation) (Figure 6; column 16, lines 2-8);

a summer in an interface 66 (Figure 6; column 22, lines 38-47);

a gain module in a receiving path (it is inherent that a speakerphone has an amplifier in its receiving path); and

a message playback signal (pre-recorded outgoing announcement) from a tape player (column 21, lines 27-36; column 22, lines 38-47);

a playback/recording module for recording a telephone conversation (column 7, lines column 22, 38-47);

Chamberlin fails to teach that the message playback signal is combined with said receive signal by said summer, allowing simultaneously hearing by a local user of said speakerphone.

However, Sacca discloses a voice messaging system with speakerphone capability in figure 1 (column 7, lines 33). Sacca teaches transmitting a tape playback message, via switch 118 and amplifier 120, to a far end party in a speakerphone mode (column 8, lines 7-14, 26-29, 36-46). Sacca teaches that in the speakerphone mode, switches 112, 122 and 136 are closed (column 9, lines 45-47; column 8, lines 36-41) so that the tape playback message is combined with receive signals and microphone signals at summing amplifiers 120 and 142 (column 8, lines 39-49; figure 1), and users at either end can hear a playback message (switches 118 and 134 are closed) and concurrently converse with one another as desired.

Therefore, since the speakerphone and both recording/playback modules of Chamberlin operated independently from each other, i.e. all operated at the same time, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Chamberlin's reference with the teaching of Sacca, such that

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during a conversation which was being recorded by a playback/recoding module, another recording/playback module would have been used to playback a user pre-recorded outgoing announcement as taught by Sacca, because such a modification would have enabled a near end user to inject other signals, such as a pre-recorded announcement or background music into a telephone conversation.

1.2 Regarding claim 2, the Chamberlin's reference, modified by Sacca, Sacca teaches a switched loss echo suppression module 126 in figure 1 to reduce acoustic coupling from speaker to microphone in a transmit mode (Sacca, column 1, lines 56-61; column 2, lines 30-37; column 10, lines 30-41).

1.3 Regarding claim 3, the Chamberlin's reference, modified by Sacca, Sacca teaches a side tone canceller 104 in figure 1. Sacca further teaches that the message playback signal is combined with the received signal at a point after the side tone canceller 104 (Figure 1).

1.4 Regarding claim 4, it is inherent that a recording/playback module has an amplifier in its output signal path.

1.5 Regarding claim 7, the Chamberlin's reference, modified by Sacca, Sacca teaches that the switched echo loss suppression module is located in said receive path after a gain module 106.

1.6 Regarding claim 9, the Chamberlin's reference, modified by Sacca, Sacca teaches a receive/transmit detector 154 in figure 1 (Sacca, column 9, lines 7-32).

1.7 Regarding claim 10, Chamberlin teaches a telephone answering device (Camberlin, column 21, lines 27-36).

1.8 Regarding claim 11, the Chamberlin's reference, modified by Sacca, teaches that recording and playback signals are summed at voice line 60, but fails to teach the record signal is from a gained representation of said received signal summed with a gained transmit signal.

However, Sacca further teaches that the message playback signal is injected into the receive path after amplified (gained) received signals and into the transmit path after amplified transmit [microphone] signals (figure 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the Chamberlin's reference with the further teachings of Sacca, so that the record signal would have been tapped from the same points where the message playback signal injected, because a modification would have clarified the modified Chamberlin reference, and tapping signal from a point for recording would have been a matter of design choice.

1.9 Regarding claims 14 and 15, Chamberlin discloses a modular telephone system in figures 4 and 6. Chamberlin teaches combining a speakerphone 18 (column 13, lines 29-31) with two recording/playback modules 12 and 14, one for playback an outgoing announcement and one for recording a telephone conversation (column 22, lines 38-43). Chamberlin also teaches independent operation of the speakerphone and of each recording/playback module (column 16, lines 19-43).

Chamberlin fails to specifically teach the details of the speakerphone and recording a receive signal while the receive signal is summed with a message playback signal during a telephone conversation.

However, Sacca discloses a voice messaging system with speakerphone capability in figure 1 (column 7, lines 33). Sacca teaches transmitting a tape playback message, via switch 118 and amplifier 120, to a far end party in a speakerphone mode (column 8, lines 7-14, 26-29, 36-46). Sacca teaches that in the speakerphone mode, switches 112, 122 and 136 are closed (column 9, lines 45-47; column 8, lines 36-41) so that the tape playback message is combined with receive signals and microphone signals at summing amplifiers 120 and 142 (column 8, lines 39-49; figure 1), and individual users at either end can hear a playback message (switches 118 and 134 are closed) and concurrently converse with one another as desired. Sacca further teaches a side tone canceller (hybrid echo canceller) 104 in the receive path (Figure 1), and a receive state and a transmit state of speakerphone operation (column 2, lines 28-37).

Therefore, since the speakerphone and both recording/playback modules of Chamberlin operated independently from each other, i.e. all operated at the same time,

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it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Chamberlin's reference with the teaching of Sacca, such that during a conversation which was being recorded by a playback/recoding module, another recording/playback module would have been used to playback a user pre-recorded outgoing announcement as taught by Sacca, because such a modification would have enabled a near end user to inject other signals, such as a pre-recorded announcement or background music into a telephone conversation.

1.10 Regarding claims 16 and 19, Chamberlin discloses a modular telephone system in figures 4 and 6. Chamberlin teaches combining a speakerphone 18 (column 13, lines 29-31) with two recording/playback modules 12 and 14, one for playback a pre-recorded outgoing announcement and one for recording a telephone conversation (column 22, lines 38-43). Chamberlin also teaches independent operation the speakerphone and each recording/playback module (column 16, lines 19-43). Chamberlin teaches using the recording/playback module 12 for recording a telephone conversation and the recording/playback module 14 for playback a pre-recorded message to a far end user (column 16, lines 2-5; column 22, lines 38-43). Chamberlin teaches the steps of:

- establishing a telephone call (column 7, lines 10-13; column 13, lines 29-33);

- initiating a speakerphone function (column 13, lines 29-31);

- playing back a voice message pre-recorded on said speakerphone (column 22, lines 38-43); and

recording a telephone conversation (column 7, lines 10-13; column 16, lines 2-5, 24-29; column 22, lines 38-43).

Chamberlin fails to teach playing back said voice message during a telephone conversation.

However, Sacca discloses a voice messaging system with speakerphone capability in figure 1 (column 7, lines 33). Sacca teaches transmitting a tape playback message, via switch 118 and amplifier 120, to a far end party in a speakerphone mode (column 8, lines 7-14, 26-29, 36-46). Sacca teaches that in the speakerphone mode, switches 112, 122 and 136 are closed (column 9, lines 45-47; column 8, lines 36-41) so that the tape playback message is combined with receive signals and microphone signals at summing amplifiers 120 and 142 (column 8, lines 39-49; figure 1), and individual users at either end can hear a playback message (switches 118 and 134 are closed) and concurrently converse with one another as desired.

Therefore, since the speakerphone and both recording/playback modules of Chamberlin operated independently from each other, i.e. all operated at the same time, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Chamberlin's reference with the teaching of Sacca, such that during a conversation which was being recorded by a playback/recoding module, another recording/playback module would have been used to playback a user pre-recorded outgoing announcement as taught by Sacca, because such a modification would have enabled a near end user to inject other signals, such as a pre-recorded announcement or background music into a telephone conversation.

1.11 Regarding claims 17 and 20, Chamberlin teaches that the telephone system is a telephone answering device (column 21, lines 27-36).

2. Claims 5, 6, 8, 12, 13, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chamberlin et al. US 4,817,127 in view of Sacca US 5,692,042 and further in view of Li US 5,612,996.

2.1 Regarding claims 5, 6, 12 and 13, the Chamberlin's reference, modified by Sacca, teaches gain modules in signal paths, but fails to teach that these gain modules comprise an automatic gain control (AGC) portion and a fixed gain portion.

However, Li discloses a speakerphone with line echo canceller in figure 1. Li teaches in figure 1 that a gain module comprises an AGC portion 136 (or 120) and a fixed gain portion 138 (or 122).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the Chmamberlin's reference, which was modified by Sacca, with the teaching of Li so that the gain modules would have comprised an AGC portion and a fixed gain portion, because such a modification would have provided a fixed level signal to the speakerphone.

2.2 Regarding claim 8, the Chamberlin's reference, modified by Sacca, teaches playing back a pre-recorded message during a telephone conversation, but fails to teach a digital to analog converter (DAC) at a point after the switched loss echo suppression module in the receive path.

However, Li discloses a digital speakerphone in figure 2. Li teaches a DAC module 260 before speaker 264.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the Chamberlin's reference, which was modified by Sacca, with the teaching of Li so that a digital to analog converter would have been included if a digital speakerphone was used, because such a modification would have converted a digital signal back to analog for the speaker of a digital speakerphone.

2.3 Regarding claims 18 and 21, the Chamberlin's reference, modified by Sacca, teaches playing back a pre-recorded message during a telephone conversation, but fails to teach the playback signal is injected digitally.

However, Li discloses a digital speakerphone in figure 2. Li teaches that analog signals from a telephone line are converted to digital for digital signal processing (column 6, lines 56-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the Chamberlin's reference, which was modified by Sacca, with the teaching of Li so that a playback signal would have been

injected digitally when a digital speakerphone was used, because such a modification would have converted an analog signal from a tape player into a digital signal to be processed by a digital speakerphone.

### ***Response to Arguments***

3. Applicant's arguments filed 04/02/2004 have been fully considered but they are not persuasive.

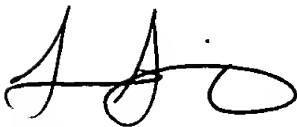
The applicants argue that the prior art of Chamberlin operates on two telephone lines based on column 16, lines 58-64 (page 9, paragraph 4; page 10, paragraph 3).

However, Chamberlin teaches in column 16, lines 58-64: " By way of example in the use of such interconnection, one recording/playback module may be used to record an incoming telephone call while a second recording/playback module would be used to transmit an outgoing message as is done in an automatic telephone answering system". Chamberlin does not teach two telephone lines. In fact Chamberlin teaches that his system operates only with one other telephone (one telephone line) (column 21, lines 27-36).

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***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Simon Sing whose telephone number is (703) 305-3221. The examiner can normally be reached on Monday - Friday from 8:30 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang, can be reached at (703) 305-4895. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.



S.S.

06/25/2004

FAN TSANG  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

